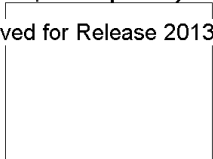


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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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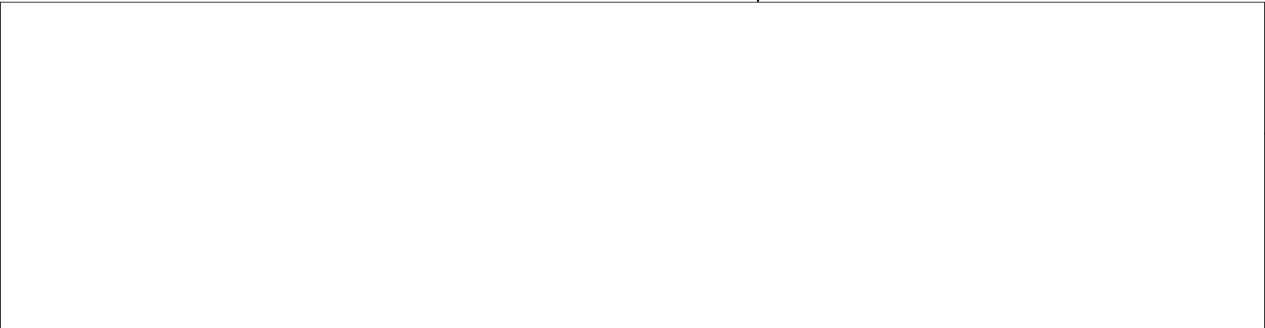
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COUNTRY	USSR (Moscow Oblast)	REPORT	
SUBJECT	Additional Information on the Work of the Insulation Coating Laboratory, Institute 160, Fryazino	DATE DISTR.	22 September 1953
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SUPPLEMENT TO
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1.

The chief basis for selecting the coating thickness was the grain size of the coating applied. The coating was usually applied until nothing of the filament could be seen. By this method, for example, a two micron grain size would require a coating thickness of about five microns, and a five micron grain size would require a coating thickness of ten to twelve microns. Grains were rarely of a uniform size, however, so the coatings were usually checked by means of a microscope. [] also had to determine that the coating thickness was not too thin, which would make for low longevity, or that it was not too thick, so that the outside would be cooler than the inside and thus require too much energy for heating.

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2.

Air drying (method a) was used whenever there was no rush. Zirconium coatings, however, were always dried by this method because of the danger of fire. Fan drying (method c) was used primarily in production processes, in which case one position was used for coating and two positions for drying. Oven drying (method b) was used in the case of tungsten or nickel filaments which were to be directly heated. In this case an oven with a temperature of about 200° C. was placed directly after the paste-applying position and the coated wire passed through it and was then wound on a spool.

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3.

[redacted] these resistors [redacted] were not "noise free," but they were relatively induction free. The resistors were used as end resistors, damping resistors, measuring resistors, and adaptation resistors, as 50X1-HUM well as for all kinds of short wave equipment in the ten centimeter range.

When coating material with platinum, 2000 volts were used with a hydrogen pressure of from 0.1 to 0.3 millimeter. The electrode temperature was about 1000° C. Gold coating took 1500 volts and a temperature of about 700 to 800° C. Silver coating took 1000 volts and a temperature about the same as gold. The sputtering process was used in order to achieve uniform resistors. Quartering a sputtered piece would give four resistors of almost equal resistance.

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